BMP-3b, DPP, Vg1, Vgr, 60A protein, GDF-1, GDF-3, GDF-5, GDF-6, GDF-7, GDF-8, GDF-9, GDF-10, and GDF-11, wherein said morphogen is administered in a dose of about 0.01 to 100 mg/kg body weight of said mammal,
further wherein said dysfunction is associated with hippocampal tissue damage in said mammal, and wherein administering said morphogen protects against cognitive dysfunction or reduces memory dysfunction in said mammal.

5. (Amended) The method of claim [1,] 2 [, 3 or 4] wherein said [mammal is afflicted with or at risk of brain] tissue damage [associated with] results from mechanical or chemical trauma, oxygen deprivation, glucose deprivation, a neurotoxin, a neurodegenerative disorder or dementia.

7. (Amended) The method of claim [1,] 2 [, 3 or 4] wherein said mammal is a human.

8. (Amended) The method of claim [6] 7 wherein said human is at risk of or is afflicted with arterial occlusion cardiac arrest or stroke.

9. (Amended) The method of claim [1,] 2 [, 3 or 4] wherein said mammal is afflicted with or at risk of amnesia.

10. (Amended) The method of claim [1,] 2 [, 3 or 4 which] wherein said mammal is afflicted with or is at risk of a disorder selected from the group consisting of Alzheimer's Disease, Pick Disease, Parkinson's Disease, amylotrophic lateral sclerosis, Lewis-body disease, dementia, pugilista, cerebral atrophy, senility, malnutrition, glucose metabolism disorder [or] and anorexia.

11. (Amended) The method of claim [1,] 2 [, 3 or 4] wherein said morphogen [ic protein] is administered intraventricularly, intravenously, or intracisternally.